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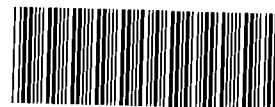
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EG&G Rocky Flats, Inc.
Attn: Mr. Thomas Greengard
14142 Denver West Parkway
Building 51, Suite 200
Golden, Colorado 80401

Subject: Meeting Minutes
Subsurface IM/IRA at Operable Unit No. 2
EG&G Contract No. BA 26951PB
WESTON Work Order No. 2029-37-01

Dear Mr. Greengard:

Enclosed are the minutes of the Subsurface IM/IRA project meeting held at your office on 11 Aug 1992.

As we discussed during the meeting, investigation of air injection will be included in the Test Plan the East Trenches Area. However, WESTON recommends that a phased implementation approach used to test air injection. Specifically, alluvial and sandstone extraction wells should first be installed and tested. If vapor extraction alone is successful in removing VOCs, pressure monitoring and injection wells could then be installed, and passive and active air injection investigated. Passive injection would be examined by opening the monitoring wells to the atmosphere to augment air flow to the formations. It is expected that because the alluvium in the vicinity of the proposed test site is expected to be highly permeable, a substantial amount of sweep air will be available to the formation without active injection of supplemental air. Nonetheless, this determination is best made as part of proposed phased implementation. I will discuss the contracting aspects of this phased approach with Jim Koffer as soon as possible.

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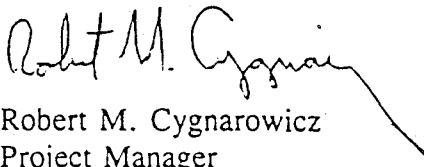
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Please contact me or Ciggy if you have any questions or comments regarding the enclosed Meeting Minutes.

Sincerely,

ROY F. WESTON, INC.

A handwritten signature in black ink, appearing to read "Robert M. Cygnarowicz".

Robert M. Cygnarowicz
Project Manager

A handwritten signature in black ink, appearing to read "Michael A. Anderson".

Michael A. Anderson, Ph.D., P.E.
Vice President

cc: Meeting Attendees
E. Dille', EG&G
2029-37-01

MEETING MINUTES

EG&G - ROCKY FLATS, INC.

PROJECT: Subsurface IM/IRA
W.O. #: 2029-37-01-0130
LOCATION: EG&G, Denver West
DATE: 11 August 1992
TIME: 8:30 to 10:45 AM

ATTENDEES:

Craig Cowdery, EG&G	Scott Grace, DOE	Mike Anderson, WESTON
Tom Greengard, EG&G	Paul Singh, DOE	Bob Cygnarowicz, WESTON
Jim Koffer, EG&G		Ken Napp, WESTON

The purpose of the meeting was to discuss three key Subsurface IM/IRA design issues that were not resolved at the 30% Design Review Meeting held on 08 August 1992. The issues included horizontal venting, air injection, and vapor extraction technology licensing. Highlights of the discussions and the agreements reached during the meeting are listed below.

- A consensus was reached by all attendees that the overall approach to pilot test planning and implementation should emphasize the "early, small-scale" philosophy presented in the Subsurface IM/IRAP/EA. Design and implementation of innovative technologies (e.g., horizontal venting) should be conducted outside of the milestone activities schedule so as to not impact the project schedule.
- Agreement was reached between all attendees that the scope of the first Test Plan should not include design and implementation of horizontal venting. Rather, the scope should be limited to pilot testing vapor extraction (and injection) with vertical wells as proposed in the Subsurface IM/IRAP/EA.
- WESTON will fully research horizontal venting and evaluate its applicability with respect to the Subsurface IM/IRA project. The research effort will address all pertinent aspects of implementing a horizontal vent including available drilling technologies (i.e., trench box, jack and bore, auger, etc.). WESTON will document the findings and present our recommendations in a position paper. The evaluation of the feasibility of horizontal venting will incorporate the pilot test and soil vapor survey data collected at the East Trenches Area test site.
- WESTON will provide a draft Soil Vapor Survey Workplan to EG&G on or before 27 August 1992. The Workplan will present sampling plans for up to six OU2 sites to be surveyed, and rank the sites "best to worst" with respect to the likelihood of detecting organic vapors.
- WESTON will provide resumes to EG&G for all non-Denver WESTON personnel working on the Subsurface IM/IRA Pilot Test Plans.

- WESTON will prepare a Gantt schedule chart for the Subsurface IM/IRA project. The schedule is to include all major milestones for implementation of the three vapor extraction pilot tests including planning and execution of the soil vapor surveys.
- WESTON will prepare a position paper identifying currently patented vapor and ground-water extraction well designs. The paper will also address licensing requirements, estimated licensing fees, and recommended designs for the Subsurface IM/IRA.
- WESTON will incorporate guidance set forth in the "Guide for Conducting Treatability Studies under CERCLA: Soil Vapor Extraction, EPA/540/2-91/019A, September 1991" into the Subsurface IM/IRA Pilot Test Plans as appropriate.